REMARKS

Reconsideration of the above-identified patent application, as amended herein, is respectfully requested.

This Amendment is in response to the Office Action dated September 5, 2003. Claims 1-10, 12, and 14-15 are pending in this application. Claims 1, 3 and 12 are amended herein. Of the claims, only claims 1, 12, 14 and 15 are independent.

Claim 12 is amended herein to correct a typographical error. In this amendment, the deletion is shown by double bracketing. No new matter has been added and the scope of the invention has not been changed by this amendment.

In the Office Action, claims 1-3 have been rejected under 35 U.S.C.§102(b) as being anticipated by Kleinburg et al. (US 5,299,053). For the reasons set forth below, it is believed that the claims are neither anticipated nor rendered unpatentable by the prior art of record.

Claim 1, as amended herein, requires:

***

> "1. (Currently amended) In a microscope having a non-scanning illumination device for illuminating a subject over a field of view by directing light along an illumination beam path through a main objective of said microscope or in a region of a main objective of said microscope, and ***a plurality of optical components in said illumination beam path which diffract or refract the light***, the improvement comprising:
>
> a mechanism for ***moving at least one of said plurality of optical components which diffract or refract the light*** so that a reduction of light intensity incident upon the subject over the field of view occurs because of the movement of said at least one optical component."

The present invention is a microscope having an apparatus for reducing light intensity at a subject while the subject is being viewed through the microscope. The reduction of light intensity incident upon the subject occurs because of the movement of at least one of a plurality of optical components in the illumination beam path which diffract or refract the light.

Kleinburg et al. disclose a microscope "having a variable shutter illumination system which decreases the amount of light from the light source passing through the shutter to the field of view." (See the Abstract.) The disclosed variable shutter illumination system provides a rotating disk, or shutter, placed between the illumination source and the objective (subject). Col. 3, lines 31-34. As the mechanically controlled shutter rotates around the illumination beam path, a certain amount of light is blocked by the shutter and the remaining light is allowed to pass through an aperture in the rotating shutter. The amount of light blocked by or allowed to pass through the shutter, depends upon on the size of the aperture. Col. 3, lines 35-39 and Figs. 2, 3 and 5.

As shown in Fig. 2 of Kleinburg et al., the variable shutter mechanism includes a disk 62 with a semi-circular cutout 64. In this example, as the shutter rotates around the illumination beam path 46, the light is blocked by the disk for one-half of the time and allowed to pass through the cutout one-half of the time. Col. 5, lines 34-48. Alternate embodiments of the shutter are also shown in Figs. 3, 5 and 7 of Kleinburg et al. However, all embodiments disclose a shutter that is either entirely closed or entirely open for a period of time.

It is submitted that the shutter disclosed in Kleinburg et al. is not the same as the "plurality of optical components in said illumination beam path which diffract or refract the light" as required by amended claim 1. As stated at ¶0012 of the specification, "removal of an optical component, *such as a lens*, from the beam path annuls the intended function of that component." And "all the optical components in the beam path usually serve to collimate or focus the light" and removal of which "results in diffuse scattering of the light." The optical components of the invention do not block the light from passing through them, but rather diffract or refract the light. The shutter disclosed in Kleinburg et al. cannot be considered "an optical component...which diffracts or refracts the light" as required by claim 1. In stark contrast, the shutter of Kleinburg et al. completely *blocks* the light for a period of time.

Accordingly, it is respectfully submitted that claim 1, as amended herein, is not anticipated or rendered unpatentable by the prior art of record as each and every element of the claim is not disclosed in the prior art reference.

Turning to dependent claim 2, the present invention is directed toward a microscope having an apparatus for reducing light intensity at a subject. According to claim 2, the reduction in light intensity is achieved by *removal* of an optical component from the illumination beam path.

For the reasons stated above with regard to claim 1, it is respectfully submitted that claim 2, as amended herein, is patentable over the cited reference. Furthermore, it is respectfully submitted that claim 2 is not anticipated or rendered unpatentable by the prior art of record regardless of the patentablility of claim 1. Specifically, claim 2 requires that the "mechanism removes said at least one optical component from said illumination beam path to cause said reduction of light intensity."

In contrast, the device disclosed by Kleinburg et al. does not remove an optical component from the beam path. Rather, the shutter device, which is mounted to a motor shaft 58, is stationary with respect to the microscope. The disk 62 merely rotates around the beam path alternately blocking the light and allowing the light to pass through an aperture. The shutter device of Kleinburg et al. is not *removed* from the beam path, but is inserted, or moved into, the beam path to block the light.

Accordingly, it is respectfully submitted that claim 2 is not anticipated or rendered unpatentable by the prior art of record as each and every element of the claim is not disclosed in the prior art reference.

Turning now to amended claim 3, the present invention is directed toward a microscope having an apparatus for reducing light intensity at a subject. According to claim 3, the reduction in light intensity is achieved by *displacement* of an optical component *along* the illumination beam path.

For the reasons stated above with regard to claim 1, it is respectfully submitted that claim 3, as amended herein, is patentable over the cited reference. Furthermore, it is respectfully submitted that claim 3 is not anticipated or rendered unpatentable by the prior art of record regardless of the patentablility of claim 1. Specifically, claim 3 requires that the "mechanism

displaces said at least one optical component along said illumination beam path to cause said reduction of light intensity."

In contrast, the device disclosed by Kleinburg et al. does not displace an optical component along the beam path. Rather, the shutter device, which is mounted to a motor shaft 58, is stationary with respect to the microscope and the longitudinal axis of (the direction of) the beam path. The disk 62 merely rotates around the axis of the beam path alternately blocking the light and allowing it to pass through an aperture, but does not move along the line of the beam path. The shutter device of Kleinburg et al. is never *displaced along* the beam path.

Accordingly, it is respectfully submitted that claim 3 is not anticipated or rendered unpatentable by the prior art of record as each and every element of the claim is not disclosed in the prior art reference.

For the reasons stated above, it is respectfully submitted that the rejection of claims 1-3 under 35 U.S.C. 102(b) be withdrawn.

Applicant gratefully acknowledges the Examiner's indication that independent claims 12 and 14-15 are allowed, and that dependent claims 4-10 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, Applicant respectfully submits that claims 1-3, from which claims 4-10 depend, are patentable over the prior art of record, since no prior art reference, or combination thereof, disclose or suggest:

- "a mechanism for moving at least one of said plurality of optical components which diffract or refract the light so that a reduction of light intensity incident upon the subject over the field of view occurs because of the movement of said at least one optical component";

- "said mechanism removes said at least one optical component from said illumination beam path to cause said reduction of light intensity"; or

- "said mechanism displaces said at least one optical component along said illumination beam path to cause said reduction of light intensity."

For the reasons cited above, all of the claims presently pending in this application are believed to be allowable. Early and favorable action is respectfully requested. If the Examiner has any further questions or concerns, the Examiner is invited to contact the Applicant's undersigned attorney/agent.

It is also submitted that no fees are required. However, the Commissioner is hereby authorized to charge any fees due as a result of this Amendment to Deposit Account 08-2442 of the undersigned.

Respectfully submitted,
HODGSON RUSS LLP
Attorneys for Applicants

By: Rachel Watt
Rachel S. Watt
Patent Agent
Reg. No. 46,186

Date: December 5, 2003

HODGSON RUSS LLP
One M&T Plaza
Suite 2000
Buffalo, New York 14203-2391
Tel: (716) 856-4000